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1 MAY 1973

STATISTICAL REVIEW OF COUNTING
ACCELEROMETER DATA FOR NAVY AND MARINE
FLEET AIRCRAFT
FROM 1 JAN 1962 TO 1 JAN 1973

SEMI-ANNUAL SUMMARY REPORT

AIRTASK A53530/202/78012-74-84
Work Unit No. 01

Approved for public release; distribution unlimited.

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DEPARTMENT OF THE NAVY
NAVAL AIR DEVELOPMENT CENTER
WARMINSTER, PA. 18974

AIR VEHICLE TECHNOLOGY DEPARTMENT

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This report provides a specialized summary of normal acceleration data recorded by counting accelerometers. Data are separated by calendar time and major category of fleet experience. Only data reported in the counting accelerometer program are included.

Reported by: Thomas A. De Fiore
THOMAS A. DE FIORE
Mathematician

Approved by: C. G. Weeber
C. G. WEEBER, Supt.
Structures Division

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SUMMARY

This is a semi-annual progress report, and it presents a specialized summary of the data in the counting accelerometer program. Statistics describing Navy and Marine aircraft cumulative g-count exceedances are calculated and tabulated. These tabulations are separated by calendar time and into four major categories of fleet experience: Navy Training, Navy Combat, Marine Training, and Marine Combat.

These data show that the load rate distributions (counts at 1000 hours) for most models and most g-levels have a non-normal distribution. Within a model (F-4B, F-8H, etc.) differences in the average load rates exist when data are separated by calendar time or mission category.

SPECIAL NOTES

1. This report supersedes and replaces all previous issues of this semi-annual report. (Previous issue report control symbol NADC-13920-2 dated 1 Nov 1972).

2. Additional copies of this report may be obtained from:

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Air Vehicle Technology Department (Code VT)
Warminster, Pa. 18974
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Autovon 441-2896

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INDEX OF CURRENTLY OPERATIONAL MODELS

<u>Model</u>	<u>Previous 12 Months Data</u>	<u>All Data</u>
	PAGE	PAGE
F-4J (Blue Angels)	6	7
KA-3B	8	9
EKA-3B	10	11
A-4F	12	13
TA-4F	14	15
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TA-4J	18	19
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RA-5C	22	23
A-6A	24	25
EA-6A	26	27
A-6B	28	29
EA-6B	30	31
A-6C	32	33
KA-6D	34	35
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A-7B	40	41
A-7C	42	43
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C-2A	46	47
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RF-4B	50	51
F-4J	52	53
DF-8F	54	55
RF-8G	56	57
F-8H	58	59
F-8J	60	61
F-8K	62	63
F-8L	64	65
P-3A	66	67
P-3B	68	69
P-3C	70	71
ES-2D	72	73
S-2E	74	75
S-2G	76	77
T-2A	78	79
T-2B	80	81
T-2C	82	83
T-28B	84	85
T-28C	86	87
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INDEX OF OUT-OF-SERVICE MODELS AND MODELS WHICH HAVE NOT REPORTED COUNTING
ACCELEROMETER DATA DURING THE PREVIOUS 12 MONTHS (APPENDIX A)

<u>Model</u>	<u>All Data</u>
F-11A (Blue Angels)*	A-2
F-11A (Blue Angels)**	A-3
AF-1E	A-4
A-1H	A-5
A-1J	A-6
A-3B	A-7
A-4B	A-8
TA-4B	A-9
A-5A	A-10
A-5B	A-11
KC-130F	A-12
F-4A	A-13
TF-4A	A-14
F-4G	A-15
F-6A	A-16
F-8A	A-17
RF-8A	A-18
TF-8A	A-19
F-8B	A-20
F-8C	A-21
F-8D	A-22
F-8E	A-23
EF-10B	A-24
F-11A	A-25
S-2D	A-26

* TRANSDUCER LOAD-LEVEL RANGE (4-, 5-, 6-, 7-g)

** TRANSDUCER LOAD-LEVEL RANGE (6-, 7-, 8.5-, 10-g)

INTRODUCTION

The NAVAIRDEVCEN (Naval Air Development Center) is engaged in various flight maneuver-loads programs as assigned by the Naval Air Systems Command. One of these is the counting accelerometer program, and under this program data have been collected and reported since 1955.

The primary purpose of this program is to provide the flight load history of individual Navy and Marine aircraft. Other purposes include, but are not limited to, the comparison of operational loads environment with structural design requirements, the comparison of load histories of one model with another, and the determination of expected loads environment of future models. More recently, however, these data are used as the major input in the NAVAIRDEVCEN Aircraft Structural Fatigue Life Program in estimating structural fatigue damage for those aircraft which do not have counting accelerometer data.

DISCUSSION

This is a semi-annual progress report and includes statistical summaries for all Navy and Marine aircraft (whether they are currently in service or out of service) which have reported in the counting accelerometer program. Out-of-service models or models which have not reported counting accelerometer data during the previous 12 months appear in Appendix A. The summary for each out-of-service model is its final summary. New models are added as their counting accelerometer data become available.

For each model, the following statistics are presented: (See Appendix B for the statistical procedures.)

- x - the estimated mean load exceedances (counts at 1000 ft. hrs.) for each g-level recorded on the counting accelerometer.
- S - estimated standard deviation (counts at 1000 ft. hrs.) of the load exceedances for each g-level.
- A₃ - estimated skewness factor for the load exceedance distribution.

Two statistical summaries describing cumulative g-count exceedances and flight hours for each currently operational model are presented:

1. The first summary includes all quality-control accepted data reported in the time period comprising the terminal date of this report and the 12 months preceding that date.

2. The second includes all quality-control accepted data reported in the counting accelerometer program from the day each airplane was delivered for service to the terminal date of this report.

The first summary, which includes only the most recent 12 months, shows an indication of a model's current severity of usage. The second summary describes the severity of loads experienced by all airplanes of each model since acceptance. A comparison of the first summary with the second shows whether current usage for any model is more or less severe than usage over its full lifetime.

A further breakdown by mission category is provided. These are provided for each airplane model in both of the aforementioned summaries. These categories are defined as follows:

1. Navy Training - an airplane in a Navy squadron assigned to a non-combat zone. (This includes all Navy airplanes not classified as being in a combat zone.)

2. Navy Combat - an airplane in a Navy squadron assigned to a combat zone.

3. Marine Training - an airplane in a Marine squadron assigned to a non-combat zone. (This includes all Marine airplanes not classified as being in a combat zone.)

4. Marine Combat - an airplane in a Marine squadron assigned to a combat zone.

The statistics for the F-4J Blue Angels are separated into solo aircraft and diamond formation aircraft. In the subsequent tables, the total flight hours shown for a given model are the sum of the hours reported for each category. However, summing the number of airplanes reporting in each category can result in a number exceeding the total aircraft, because the same airplane may have seen service in two or more categories. Its data were separated for calculation of statistics for each respective category.

Some general statistical observations for fleet-wide loads data are the following:

1. The load exceedance distribution for many of the aircraft models is non-normal (particularly asymmetrical) at all the g-levels recorded. In general, the degree of asymmetry increased with increasing g-level.

2. The scatter measure $\frac{S}{\bar{x}}$ (coefficient of variation) increases with higher g-levels.

3. For a given g-level, there is more scatter in loads received during training than during combat.

4. Differences exist in loads frequency among various configurations of the same model and various mission categories within the same configuration.

ACKNOWLEDGEMENT

The author wishes to acknowledge Project Team Members, Messrs. Joseph Caristo and Mark Libeskind of the Air Vehicle Technology Department of the Naval Air Development Center, for their assistance in the preparation of this report.

T A B L E S

Counting accelerometer data are subject to quality control criteria modifications. Thus, in succeeding reports, model-wide summary statistics are subject to change even though a model may no longer be in service.

DATA FROM
01-72 TO 12-72

MODEL F-4J

7 AIRPLANES 1083 HOURS

BLUE ANGELS

NAVY

4 AIRPLANES
558 HOURS

DIAMOND	6.0G	7.0G	8.5G	10.0G
\bar{X}	232.36	27.45	1.78	0.00
S	**			
A ₃				

3 AIRPLANES
495 HOURS

SOLO	6.0G	7.0G	8.5G	10.0G
\bar{X}	1133.45	114.17	9.88	7.41
S	**			
A ₃				

MARINE

AIRPLANES
HOURS

	6.0G	7.0G	8.5G	10.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

	6.0G	7.0G	8.5G	10.0G
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNT PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL F-4J

13 AIRPLANES 7472 HOURS

BLUE ANGELS

NAVY

13 AIRPLANES
5080 HOURS

DIAMOND	6.00	7.00	8.50	10.00
\bar{X}	514.83	174.69	23.08	1.85
S	144.65	88.29	14.36	1.29
A ₃	0.31	0.37	0.44	0.58

9 AIRPLANES
2392 HOURS

SOLO	6.00	7.00	8.50	10.00
\bar{X}	2349.62	873.96	164.57	14.63
S	***			
A ₃				

MARINE

AIRPLANES
HOURS

	6.00	7.00	8.50	10.00
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

	6.00	7.00	8.50	10.00
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
01-72 TO 12-72

MODEL KA-3B

6 AIRPLANES 2768 HOURS

NAVY

6 AIRPLANES
2768 HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
\bar{X}	150.89	39.84	11.37	0.00
S	**			
A ₃				

AIRPLANES
HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
\bar{X}	*			
S				
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
\bar{X}	*			
S				
A ₃				

\bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL KA-3B

61 AIRPLANES 47116 HOURS

NAVY

59 AIRPLANES
43752 HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
\bar{X}	96.96	16.80	8.28	6.07
S	141.32	31.81	29.57	29.74
A ₃	2.91	4.59	6.70	6.96

14 AIRPLANES
3365 HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
\bar{X}	176.59	34.24	9.41	3.70
S	48.21	15.82	8.19	6.42
A ₃	0.61	1.10	1.15	2.76

MARINE

AIRPLANES
HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
\bar{X}	*			
S				
A ₃				

\bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
01-72 TO 12-72

MODEL EKA-3B

7 AIRPLANES 3128 HOURS

NAVY

7 AIRPLANES
2824 HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
\bar{X}	352.92	20.58	3.17	0.53
S	**			
A ₃				

1 AIRPLANES
304 HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
\bar{X}	0.00	0.00	0.00	0.00
S	**			
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL EKA-3B

18 AIRPLANES 11375 HOURS

NAVY

17 AIRPLANES
10529 HOURS

TRAINING	2.00	2.50	3.00	3.50
\bar{X}	212.95	39.86	13.07	2.19
S	319.13	64.57	23.60	4.20
A ₃	1.38	2.22	2.48	2.56

4 AIRPLANES
846 HOURS

COMBAT	2.00	2.50	3.00	3.50
\bar{X}	149.00	11.53	0.00	0.00
S	**			
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	2.00	2.50	3.00	3.50
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	2.00	2.50	3.00	3.50
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
01-72 TO 12-72

MODEL A-4F

14 AIRPLANES 3113 HOURS

NAVY

10 AIRPLANES
1222 HOURS

TRAINING	5.00	6.00	7.00	8.00
\bar{X}	1185.96	140.67	13.65	1.88
S	***			
A ₃				

2 AIRPLANES
111 HOURS

COMBAT	5.00	6.00	7.00	8.00
\bar{X}	1218.04	73.48	0.00	0.00
S	***			
A ₃				

MARINE

4 AIRPLANES
1780 HOURS

TRAINING	5.00	6.00	7.00	8.00
\bar{X}	562.32	122.73	17.77	1.42
S	***			
A ₃				

AIRPLANES
HOURS

COMBAT	5.00	6.00	7.00	8.00
\bar{X}	*			
S				
A ₃				

\bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL A-4F

48 AIRPLANES 24888 HOURS

NAVY

47 AIRPLANES
19501 HOURS

TRAINING	5.0G	6.0G	7.0G	8.0G
\bar{X}	533.91	92.22	9.03	0.60
S	393.50	66.35	9.78	1.10
A ₃	0.43	0.98	2.21	1.95

24 AIRPLANES
4607 HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
\bar{X}	567.01	172.68	25.53	2.71
S	97.54	33.92	7.17	1.74
A ₃	-0.19	0.73	0.17	1.06

MARINE

4 AIRPLANES
1780 HOURS

TRAINING	5.0G	6.0G	7.0G	8.0G
\bar{X}	562.32	122.73	17.77	1.42
S	***			
A ₃				

AIRPLANES
HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
01-72 TO 12-72

MODEL TA-4F

44 AIRPLANES 12010 HOURS

NAVY

33 AIRPLANES
9427 HOURS

TRAINING	5.0G	6.0G	7.0G	8.0G
\bar{X}	207.35	21.75	1.78	0.84
S	149.56	24.56	3.46	2.55
A ₃	1.95	3.34	3.41	3.65

40 AIRPLANES
HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
\bar{X}	0.00	0.00	0.00	0.00
S	**			
A ₃				

MARINE

11 AIRPLANES
2544 HOURS

TRAINING	5.0G	6.0G	7.0G	8.0G
\bar{X}	331.33	27.78	0.79	0.00
S	310.66	23.04	0.82	0.00
A ₃	1.90	1.06	1.27	0.00

AIRPLANES
HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
\bar{X}	*			
S				
A ₃				

\bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL TA-4F

161 AIRPLANES 183858 HOURS

NAVY

137 AIRPLANES
138527 HOURS

TRAINING	5.00	6.00	7.00	8.00
\bar{X}	137.95	17.51	1.61	0.18
S	167.79	27.97	3.06	0.90
A ₃	2.40	3.15	2.57	4.76

9 AIRPLANES
1991 HOURS

COMBAT	5.00	6.00	7.00	8.00
\bar{X}	590.27	60.68	3.41	0.77
S	***			
A ₃				

MARINE

44 AIRPLANES
43340 HOURS

TRAINING	5.00	6.00	7.00	8.00
\bar{X}	630.44	69.08	6.06	0.69
S	547.04	93.71	10.77	1.99
A ₃	1.22	3.81	4.03	5.08

AIRPLANES
HOURS

COMBAT	5.00	6.00	7.00	8.00
\bar{X}	*			
S				
A ₃				

\bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
01-72 TO 12-72

MODEL A-4G

14 AIRPLANES 1921 HOURS

NAVY

		TRAINING	5.0G	6.0G	7.0G	8.0G
14 AIRPLANES 1921 HOURS	\bar{X}		2028.74	297.85	29.17	2.92
	S		356.72	60.01	10.25	2.39
	A ₃		0.37	1.73	0.57	1.31

		COMBAT	5.0G	6.0G	7.0G	8.0G
AIRPLANES HOURS	\bar{X}		*			
	S					
	A ₃					

MARINE

		TRAINING	5.0G	6.0G	7.0G	8.0G
AIRPLANES HOURS	\bar{X}		*			
	S					
	A ₃					

		COMBAT	5.0G	6.0G	7.0G	8.0G
AIRPLANES HOURS	\bar{X}		*			
	S					
	A ₃					

\bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL A-4G

14 AIRPLANES 7694 HOURS

NAVY

14 AIRPLANES
7694 HOURS

TRAINING	5.00	6.00	7.00	8.00
\bar{X}	2310.91	424.09	52.70	4.51
S	455.62	88.41	12.74	2.33
A ₃	-0.00	-0.33	-0.80	0.19

AIRPLANES
HOURS

COMBAT	5.00	6.00	7.00	8.00
\bar{X}	*			
S				
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	5.00	6.00	7.00	8.00
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	5.00	6.00	7.00	8.00
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
01-72 TO 12-72

MODEL TA-4J

269 AIRPLANES 76103 HOURS

NAVY

255 AIRPLANES
71755 HOURS

TRAINING	5.00	6.00	7.00	8.00
\bar{X}	302.22	35.01	5.70	2.59
S	127.57	22.40	7.78	6.55
A ₃	0.76	2.51	5.57	8.06

AIRPLANES
HOURS

COMBAT	5.00	6.00	7.00	8.00
\bar{X}	*			
S				
A ₃				

MARINE

16 AIRPLANES
4348 HOURS

TRAINING	5.00	6.00	7.00	8.00
\bar{X}	532.34	11.09	0.97	0.32
S	382.61	10.01	1.34	0.45
A ₃	1.57	1.02	2.54	2.54

AIRPLANES
HOURS

COMBAT	5.00	6.00	7.00	8.00
\bar{X}	*			
S				
A ₃				

\bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL TA-4J

273 AIRPLANES 99735 HOURS

NAVY

261 AIRPLANES
94052 HOURS

TRAINING	5.0G	6.0G	7.0G	8.0G
\bar{X}	338.25	38.98	4.83	1.78
S	180.50	27.70	7.39	5.77
A ₃	2.47	3.69	5.13	8.07

AIRPLANES
HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
\bar{X}				
S				
A ₃				

MARINE

16 AIRPLANES
5683 HOURS

TRAINING	5.0G	6.0G	7.0G	8.0G
\bar{X}	440.30	8.64	0.65	0.22
S	395.33	9.59	1.20	0.40
A ₃	1.72	1.07	2.82	2.82

AIRPLANES
HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
\bar{X}				
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
01-72 TO 12-72

MODEL A-4M

30 AIRPLANES 3415 HOURS

NAVY

9 AIRPLANES
343 HOURS

TRAINING	5.0G	6.0G	7.0G	8.0G
\bar{X}	1198.92	120.87	0.00	0.00
S	**			
A ₃				

AIRPLANES
HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
\bar{X}	*			
S				
A ₃				

MARINE

28 AIRPLANES
3072 HOURS

TRAINING	5.0G	6.0G	7.0G	8.0G
\bar{X}	1442.91	317.67	48.90	16.87
S	331.22	139.21	27.22	10.86
A ₃	0.69	1.81	1.70	2.06

AIRPLANES
HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
\bar{X}	**			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL A-4M

32 AIRPLANES 4536 HOURS

NAVY

9 AIRPLANES
491 HOURS

TRAINING	5.0G	6.0G	7.0G	8.0G
\bar{X}	1320.00	147.14	4.67	0.00
S	**			
A ₃				

AIRPLANES
HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
\bar{X}	*			
S				
A ₃				

MARINE

30 AIRPLANES
4045 HOURS

TRAINING	5.0G	6.0G	7.0G	8.0G
\bar{X}	1231.64	242.98	39.88	11.07
S	337.10	134.35	25.62	10.12
A ₃	0.67	1.75	1.66	2.71

AIRPLANES
HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
01-72 TO 12-72

MODEL RA-5C

57 AIRPLANES 16647 HOURS

NAVY

55 AIRPLANES
12960 HOURS

TRAINING	3.00	4.00	5.00	6.00
\bar{X}	182.29	7.15	0.74	0.56
S	87.06	4.53	1.00	0.91
A ₃	1.71	1.67	3.59	4.76

24 AIRPLANES
3686 HOURS

COMBAT	3.00	4.00	5.00	6.00
\bar{X}	669.04	55.23	5.99	0.48
S	191.29	24.93	5.94	0.72
A ₃	0.54	1.31	2.93	2.78

MARINE

AIRPLANES
HOURS

TRAINING	3.00	4.00	5.00	6.00
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	3.00	4.00	5.00	6.00
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL RA-5C

129 AIRPLANES 112031 HOURS

NAVY

129 AIRPLANES
92556 HOURS

TRAINING	3.00	4.00	5.00	6.00
\bar{X}	220.03	16.22	1.19	0.18
S	121.05	30.30	2.08	0.59
A ₃	3.31	8.67	3.24	3.36

92 AIRPLANES
19475 HOURS

COMBAT	3.00	4.00	5.00	6.00
\bar{X}	979.97	106.95	14.71	0.71
S	441.60	71.39	19.53	1.33
A ₃	3.13	3.37	6.32	3.59

MARINE

AIRPLANES
HOURS

TRAINING	3.00	4.00	5.00	6.00
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	3.00	4.00	5.00	6.00
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
01-72 TO 12-72

MODEL A-6A

204 AIRPLANES 52081 HOURS

NAVY

161 AIRPLANES
29102 HOURS

TRAINING	4.00	5.00	6.00	7.00
\bar{X}	1423.31	547.56	107.94	10.07
S	439.65	222.56	59.40	7.03
A ₃	1.11	1.90	2.16	2.35

39 AIRPLANES
7138 HOURS

COMBAT	4.00	5.00	6.00	7.00
\bar{X}	1469.02	705.11	189.82	16.14
S	435.15	258.62	97.07	10.39
A ₃	3.32	2.69	1.32	1.54

MARINE

60 AIRPLANES
13660 HOURS

TRAINING	4.00	5.00	6.00	7.00
\bar{X}	919.00	246.72	40.75	3.70
S	291.85	102.03	36.20	4.87
A ₃	0.56	0.97	3.12	4.25

13 AIRPLANES
2181 HOURS

COMBAT	4.00	5.00	6.00	7.00
\bar{X}	1155.08	562.26	84.77	13.39
S	187.95	195.03	40.53	10.36
A ₃	0.10	1.75	1.81	1.90

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL A-6A

413 AIRPLANES 320942 HOURS

NAVY

376 AIRPLANES
186475 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	1337.74	425.89	74.14	7.00
S	444.07	213.50	56.89	9.16
A ₃	0.69	1.95	3.83	7.52

187 AIRPLANES
36183 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	1069.49	444.21	109.73	13.35
S	272.97	153.14	56.39	7.71
A ₃	4.44	4.94	3.38	2.00

MARINE

171 AIRPLANES
72846 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	909.82	223.55	32.47	3.00
S	364.61	122.05	26.01	4.24
A ₃	0.75	0.98	1.88	3.14

71 AIRPLANES
25438 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	454.90	147.66	23.31	1.32
S	219.32	114.63	22.12	3.53
A ₃	1.13	2.86	3.20	6.85

\bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
01-72 TO 12-72

MODEL EA-6A

14 AIRPLANES 1817 HOURS

NAVY

	TRAINING	4.0G	5.0G	6.0G	7.0G
AIRPLANES	\bar{X}	*			
HOURS	S				
	A ₃				

	COMBAT	4.0G	5.0G	6.0G	7.0G
AIRPLANES	\bar{X}	*			
HOURS	S				
	A ₃				

MARINE

14 AIRPLANES
1817 HOURS

	TRAINING	4.0G	5.0G	6.0G	7.0G
AIRPLANES	\bar{X}	43.23	4.35	0.36	0.09
HOURS	S	20.18	2.56	1.07	0.77
	A ₃	0.74	1.37	2.25	3.33

	COMBAT	4.0G	5.0G	6.0G	7.0G
AIRPLANES	\bar{X}	*			
HOURS	S				
	A ₃				

\bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL EA-6A

18 AIRPLANES 11930 HOURS

NAVY

AIRPLANES HOURS	TRAINING	4.00	5.00	6.00	7.00
	\bar{X}	*			
	S				
	A ₃				

AIRPLANES HOURS	COMBAT	4.00	5.00	6.00	7.00
	\bar{X}	*			
	S				
	A ₃				

MARINE

18 AIRPLANES 11591 HOURS	TRAINING	4.00	5.00	6.00	7.00
	\bar{X}	44.89	4.50	0.18	0.00
	S	26.45	5.11	0.57	0.30
	A ₃	1.78	1.55	1.59	3.89

4 AIRPLANES 339 HOURS	COMBAT	4.00	5.00	6.00	7.00
	\bar{X}	0.00	0.00	0.00	0.00
	S	**			
	A ₃				

\bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
01-72 TO 12-72

MODEL A-6B

14 AIRPLANES 3318 HOURS

NAVY

13 AIRPLANES
2992 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	530.80	119.76	24.03	2.75
S	154.23	50.25	20.07	4.35
A ₃	1.10	1.91	1.79	2.36

6 AIRPLANES
326 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	289.28	77.93	16.66	4.28
S	***			
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

\bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL A-6B

17 AIRPLANES 7669 HOURS

NAVY

17 AIRPLANES
6109 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	431.94	94.69	17.25	2.57
S	112.16	38.95	14.78	3.07
A ₃	0.76	1.53	1.71	2.26

9 AIRPLANES
1560 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	284.33	98.28	5.20	0.25
S	**			
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

\bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
01-72 TO 12-72

MODEL EA-6B

18 AIRPLANES 4211 HOURS

NAVY

18 AIRPLANES
4196 HOURS

TRAINING	4.00	5.00	6.00	7.00
\bar{X}	5.88	3.93	0.00	0.00
S	27.03	4.92	0.00	0.00
A ₃	1.83	2.52	0.00	0.00

2 AIRPLANES
15 HOURS

COMBAT	4.00	5.00	6.00	7.00
\bar{X}	60.35	0.00	0.00	0.00
S	**			
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	4.00	5.00	6.00	7.00
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	4.00	5.00	6.00	7.00
\bar{X}	*			
S				
A ₃				

\bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL EA-6B

18 AIRPLANES 6596 HOURS

NAVY

18 AIRPLANES
6596 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	94.57	22.78	3.99	0.00
S	78.26	27.34	7.99	0.00
A ₃	2.84	2.66	3.34	0.00

2 AIRPLANES
15 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	60.35	0.00	0.00	0.00
S	**			
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
01-72 TO 12-72

MODEL A-6C

10 AIRPLANES 1311 HOURS

NAVY

10 AIRPLANES
1174 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	474.09	113.48	6.22	0.82
S	**			
A ₃				

1 AIRPLANES
137 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	0.00	0.00	0.00	0.00
S	**			
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

\bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL A-6C

12 AIRPLANES 2507 HOURS

NAVY

12 AIRPLANES
2208 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	439.91	110.50	5.98	0.41
S	72.06	29.33	4.55	0.66
A ₃	-0.42	0.19	0.97	2.50

3 AIRPLANES
- 299 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	581.03	302.66	58.59	9.70
S	**			
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
- S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
- A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
- * NO DATA IN THIS CATEGORY
- ** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
01-72 TO 12-72

MODEL KA-6D

44 AIRPLANES 15211 HOURS

NAVY

43 AIRPLANES
9399 HOURS

TRAINING	4.00	5.00	6.00	7.00
\bar{X}	37.39	4.61	0.64	0.16
S	38.64	6.28	1.26	0.31
A ₃	3.75	4.74	5.43	5.43

23 AIRPLANES
5812 HOURS

COMBAT	4.00	5.00	6.00	7.00
\bar{X}	23.57	4.56	1.04	0.00
S	18.18	5.12	2.10	0.00
A ₃	1.27	2.06	2.98	0.00

MARINE

AIRPLANES
HOURS

TRAINING	4.00	5.00	6.00	7.00
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	4.00	5.00	6.00	7.00
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL KA-6D

46 AIRPLANES 24494 HOURS

NAVY

45 AIRPLANES
17328 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	27.89	3.64	0.65	0.20
S	31.28	5.20	1.16	0.52
A ₃	3.47	3.93	3.32	4.64

27 AIRPLANES
7166 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	21.71	4.04	0.97	0.00
S	17.02	4.60	1.88	0.00
A ₃	1.19	2.21	3.20	0.00

MARINE

AIRPLANES
HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

\bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
01-72 TO 12-72

MODEL A-6E

21 AIRPLANES 5168 HOURS

NAVY

21 AIRPLANES
5168 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	717.16	143.04	16.51	2.34
S	278.57	87.65	20.60	3.47
A ₃	3.02	3.22	3.33	2.75

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

\bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL A-6E

21 AIRPLANES 5533 HOURS

NAVY

21 AIRPLANES
5533 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	967.04	180.70	25.05	2.29
S	473.31	93.76	21.55	3.35
A ₃	3.05	2.74	2.81	2.76

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

\bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
01-72 TO 12-72

MODEL A-7A

90 AIRPLANES 29963 HOURS

NAVY

89 AIRPLANES
20790 HOURS

TRAINING	5.00	6.00	7.00	8.00
\bar{X}	632.30	133.00	13.68	0.51
S	352.14	79.86	9.87	1.28
A ₃	2.31	2.18	1.55	4.27

35 AIRPLANES
9173 HOURS

COMBAT	5.00	6.00	7.00	8.00
\bar{X}	918.69	312.11	28.47	1.96
S	185.05	97.83	16.06	2.69
A ₃	-0.47	0.42	0.94	3.02

MARINE

AIRPLANES
HOURS

TRAINING	5.00	6.00	7.00	8.00
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	5.00	6.00	7.00	8.00
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL A-7A

194 AIRPLANES 230678 HOURS

NAVY

194 AIRPLANES
167544 HOURS

TRAINING	5.0G	6.0G	7.0G	8.0G
\bar{X}	1146.50	214.72	22.37	2.22
S	419.05	101.36	16.54	2.90
A ₃	-0.01	0.62	1.44	2.41

133 AIRPLANES
63134 HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
\bar{X}	745.79	232.94	32.75	2.68
S	149.42	69.97	16.22	2.46
A ₃	-0.22	0.86	0.91	1.75

MARINE

AIRPLANES
HOURS

TRAINING	5.0G	6.0G	7.0G	8.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
\bar{X}	*			
S				
A ₃				

\bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
01-72 TO 12-72

MODEL A-7B

81 AIRPLANES 26985 HOURS

NAVY

78 AIRPLANES
20298 HOURS

TRAINING	5.0G	6.0G	7.0G	8.0G
\bar{X}	1035.20	309.59	48.58	7.77
S	426.24	160.51	50.59	14.75
A ₃	0.86	1.24	3.93	5.03

25 AIRPLANES
- 6686 HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
\bar{X}	1257.08	419.71	52.12	2.62
S	310.72	99.26	23.89	1.62
A ₃	-0.62	-0.66	1.65	0.54

MARINE

AIRPLANES
HOURS

TRAINING	5.0G	6.0G	7.0G	8.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL A-7B

83 AIRPLANES 27584 HOURS

NAVY

80 AIRPLANES
20866 HOURS

TRAINING	5.00	6.00	7.00	8.00
\bar{X}	1061.56	313.53	47.91	7.61
S	442.73	159.94	49.96	14.56
A ₃	1.07	1.20	4.00	5.11

25 AIRPLANES
6717 HOURS

COMBAT	5.00	6.00	7.00	8.00
\bar{X}	1255.93	419.94	52.17	2.62
S	310.18	99.04	23.71	1.61
A ₃	-0.61	-0.66	1.65	0.54

MARINE

AIRPLANES
HOURS

TRAINING	5.00	6.00	7.00	8.00
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	5.00	6.00	7.00	8.00
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
01-72 TO 12-72

MODEL A-7C

27 AIRPLANES 9313 HOURS

NAVY

23 AIRPLANES
3422 HOURS

TRAINING	5.0G	6.0G	7.0G	8.0G
\bar{X}	566.74	100.76	7.72	1.10
S	108.79	29.19	4.31	0.82
A ₃	0.70	0.75	1.05	1.44

19 AIRPLANES
- 5891 HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
\bar{X}	709.15	156.10	16.92	1.11
S	175.65	36.92	6.04	0.98
A ₃	1.15	0.11	0.40	1.21

MARINE

AIRPLANES
HOURS

TRAINING	5.0G	6.0G	7.0G	8.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL A-7C

28 AIRPLANES 11262 HOURS

NAVY

25 AIRPLANES
5371 HOURS

TRAINING	5.00	6.00	7.00	8.00
\bar{X}	800.17	100.48	5.98	0.78
S	228.55	36.80	3.39	0.76
A ₃	0.32	0.17	0.71	1.33

19 AIRPLANES
5591 HOURS

COMBAT	5.00	6.00	7.00	8.00
\bar{X}	709.15	156.10	16.92	1.11
S	175.65	36.92	6.04	0.98
A ₃	1.15	0.11	0.40	1.21

MARINE

AIRPLANES
HOURS

TRAINING	5.00	6.00	7.00	8.00
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	5.00	6.00	7.00	8.00
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
01-72 TO 12-72

MODEL A-7E

118 AIRPLANES 21734 HOURS

NAVY

108 AIRPLANES
16835 HOURS

TRAINING	5.0G	6.0G	7.0G	8.0G
\bar{X}	949.05	133.18	7.20	0.99
S	270.73	45.53	4.35	1.88
A ₃	1.55	1.13	2.88	5.54

30 AIRPLANES
4899 HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
\bar{X}	348.41	70.73	4.43	0.27
S	39.16	14.81	1.71	0.44
A ₃	0.43	0.66	1.30	4.58

MARINE

AIRPLANES
HOURS

TRAINING	5.0G	6.0G	7.0G	8.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL A-7E

118 AIRPLANES 22472 HOURS

NAVY

108 AIRPLANES
17574 HOURS

TRAINING	5.00	6.00	7.00	8.00
\bar{X}	923.47	129.44	7.19	0.93
S	271.42	45.29	4.34	1.84
A ₃	1.57	1.22	2.74	5.54

30 AIRPLANES
4899 HOURS

COMBAT	5.00	6.00	7.00	8.00
\bar{X}	348.41	70.73	4.43	0.27
S	39.16	14.81	1.71	0.44
A ₃	0.43	0.66	1.30	4.56

MARINE

AIRPLANES
HOURS

TRAINING	5.00	6.00	7.00	8.00
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	5.00	6.00	7.00	8.00
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
01-72 TO 12-72

MODEL C-2A

12 AIRPLANES 2390 HOURS

NAVY

12 AIRPLANES
2390 HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
\bar{X}	23.27	12.20	9.05	8.07
S	73.12	30.19	17.45	17.57
A ₃	2.72	2.14	2.77	2.78

AIRPLANES
HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
\bar{X}	*			
S				
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
- S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
- A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
- * NO DATA IN THIS CATEGORY
- ** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL C-2A

18 AIRPLANES 47942 HOURS

NAVY

18 AIRPLANES
47942 HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
\bar{X}	53.45	16.74	7.26	2.13
S	65.89	28.88	12.43	4.97
A ₃	2.05	2.46	2.08	1.73

AIRPLANES
HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
\bar{X}	*			
S				
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
01-72 TO 12-72

MODEL F-4B

231 AIRPLANES 42730 HOURS

NAVY

151 AIRPLANES
13970 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	2237.36	614.10	290.70	74.12
S	700.84	348.31	176.03	49.24
A ₃	2.25	3.19	4.10	2.76

39 AIRPLANES
10499 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	1257.94	522.82	197.48	46.16
S	322.42	144.04	68.10	31.37
A ₃	0.55	1.06	0.99	2.55

MARINE

92 AIRPLANES
15142 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	3046.58	1123.53	375.70	105.38
S	832.92	386.93	164.53	60.29
A ₃	0.99	1.24	1.35	1.73

17 AIRPLANES
3119 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	2640.43	1240.34	521.77	155.81
S	739.10	199.84	144.47	73.40
A ₃	1.34	0.61	0.70	1.19

\bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL F-4B

611 AIRPLANES 819908 HOURS

NAVY

571 AIRPLANES
421536 HOURS

TRAINING	4.00	5.00	6.00	7.00
\bar{X}	1845.38	625.68	170.88	40.67
S	1086.56	487.13	199.88	73.10
A ₃	2.17	2.51	4.01	6.30

290 AIRPLANES
- 106957 HOURS

COMBAT	4.00	5.00	6.00	7.00
\bar{X}	1141.06	404.72	128.09	30.63
S	372.54	130.93	66.30	30.31
A ₃	3.07	2.06	4.33	9.46

MARINE

329 AIRPLANES
186624 HOURS

TRAINING	4.00	5.00	6.00	7.00
\bar{X}	2162.54	680.72	162.37	34.82
S	1094.40	456.05	171.74	52.53
A ₃	1.60	1.98	2.64	3.47

226 AIRPLANES
104790 HOURS

COMBAT	4.00	5.00	6.00	7.00
\bar{X}	2203.49	550.18	211.52	40.20
S	686.26	336.74	143.48	39.04
A ₃	1.56	1.34	2.28	3.01

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
01-72 TO 12-72

MODEL RF-4B

28 AIRPLANES 5342 HOURS

NAVY

26 AIRPLANES
HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	0.00	0.00	0.00	0.00
S	**			
A ₃				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

MARINE

28 AIRPLANES
5317 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	253.19	66.93	15.79	3.40
S	100.29	36.27	12.14	4.65
A ₃	1.55	1.63	2.61	3.59

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
- S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
- A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
- * NO DATA IN THIS CATEGORY
- ** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL RF-4B

46 AIRPLANES 49703 HOURS

NAVY

26 AIRPLANES
HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	0.00	0.00	0.00	0.00
S	**			
A ₃				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

MARINE

46 AIRPLANES
41725 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	374.33	91.05	19.62	4.55
S	237.33	85.51	23.22	6.63
A ₃	1.13	3.48	2.92	4.17

14 AIRPLANES
7952 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	1087.20	210.67	41.73	8.95
S	409.39	78.92	26.21	5.42
A ₃	1.46	1.66	2.03	1.02

\bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
01-72 TO 12-72

MODEL F-4J

366 AIRPLANES 98788 HOURS

NAVY

274 AIRPLANES
50041 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	3055.72	1154.11	296.52	59.07
S	915.40	397.94	143.46	42.56
A ₃	0.85	0.51	1.60	2.92

124 AIRPLANES
27667 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	1282.48	504.27	153.05	35.42
S	272.64	107.20	47.33	32.18
A ₃	1.75	1.61	2.46	5.75

MARINE

95 AIRPLANES
16618 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	4099.03	1567.98	535.51	144.61
S	869.83	418.91	208.85	77.56
A ₃	1.26	1.31	1.56	1.96

29 AIRPLANES
4462 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	2610.66	1390.79	476.59	87.64
S	293.71	179.63	124.11	42.56
A ₃	0.73	-0.63	0.25	1.14

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL F-4J

454 AIRPLANES 326384 HOURS

NAVY

414 AIRPLANES
179899 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	3484.09	1317.68	428.97	111.12
S	1679.79	825.84	341.70	109.33
A ₃	1.19	1.58	2.07	2.72

157 AIRPLANES
43854 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	1105.62	448.21	137.63	35.44
S	318.61	140.65	60.83	37.89
A ₃	1.35	2.83	2.84	4.47

MARINE

169 AIRPLANES
95255 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	4818.38	1863.54	616.07	178.64
S	1527.43	639.40	285.04	115.31
A ₃	1.10	1.03	1.03	1.63

44 AIRPLANES
7376 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	2985.16	1421.84	482.40	88.75
S	604.02	277.43	168.93	43.22
A ₃	2.68	2.23	1.93	1.32

\bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
01-72 TO 12-72

MODEL DF-8F

2 AIRPLANES 166 HOURS

NAVY

2 AIRPLANES
166 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	0.00	0.00	0.00	0.00
S	**			
A ₃				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	**			
S				
A ₃				

\bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL DF-8F

13 AIRPLANES 9599 HOURS

NAVY

13 AIRPLANES
9599 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	405.48	91.31	11.23	0.82
S	271.17	85.23	15.41	1.65
A ₃	0.49	0.76	1.93	1.35

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
01-72 TO 12-72

MODEL RF-8G

17 AIRPLANES 3927 HOURS

NAVY

16 AIRPLANES
3865 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	194.34	37.88	7.10	1.43
S	73.52	16.47	5.02	1.29
A ₃	0.67	0.81	0.71	1.03

2 AIRPLANES
62 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	363.63	141.72	18.65	0.00
S	**			
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

\bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL RF-8G

30 AIRPLANES 23990 HOURS

NAVY

29 AIRPLANES
22893 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	487.23	144.84	34.05	4.97
S	219.63	73.24	28.37	8.14
A ₃	-0.19	0.31	1.53	4.20

11 AIRPLANES
- 1097 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	1528.38	402.87	62.52	7.51
S	392.03	91.17	26.79	5.79
A ₃	1.20	2.05	1.90	1.58

MARINE

AIRPLANES
HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

\bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS

S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS

A₃ SKEWNESS OF LOAD RATE DISTRIBUTION

* NO DATA IN THIS CATEGORY

** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
01-72 TO 12-72

MODEL F-8H

48 AIRPLANES 8866 HOURS

NAVY

48 AIRPLANES
8866 HOURS

TRAINING	4.00	5.00	6.00	7.00
\bar{X}	1404.40	445.72	74.68	10.81
S	376.08	152.74	33.04	8.02
A ₃	-0.04	0.78	0.72	2.93

AIRPLANES
HOURS

COMBAT	4.00	5.00	6.00	7.00
\bar{X}	*			
S				
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	4.00	5.00	6.00	7.00
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	4.00	5.00	6.00	7.00
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
- S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
- A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
- * NO DATA IN THIS CATEGORY
- ** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL F-8H

85 AIRPLANES 61077 HOURS

NAVY

85 AIRPLANES
47856 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	1556.13	499.24	97.34	12.83
S	509.64	181.77	41.05	8.45
A ₃	0.44	0.55	0.23	1.63

45 AIRPLANES
13220 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	711.67	197.56	41.43	6.17
S	254.48	82.47	19.81	4.49
A ₃	2.35	2.77	2.28	1.32

MARINE

AIRPLANES
HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
01-72 TO 12-72

MODEL F-8J

97 AIRPLANES 22901 HOURS

NAVY

96 AIRPLANES
16370 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	2316.55	714.24	120.76	14.58
S	609.43	233.00	48.17	9.79
A ₃	0.39	0.95	1.66	2.54

39 AIRPLANES
- 6531 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	981.20	323.07	70.65	11.98
S	160.08	88.23	26.47	14.28
A ₃	1.26	1.04	1.97	3.90

MARINE

AIRPLANES
HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL F-8J

134 AIRPLANES 92321 HOURS

NAVY

134 AIRPLANES
66775 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	2073.97	639.28	121.91	15.24
S	635.16	224.10	49.41	9.74
A ₃	0.84	0.61	0.51	1.27

93 AIRPLANES
25545 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	741.65	249.79	53.13	8.65
S	311.16	138.60	35.43	9.38
A ₃	2.81	3.17	3.15	3.75

MARINE

AIRPLANES
HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
01-72 TO 12-72

MODEL F-8K

44 AIRPLANES 6424 HOURS

NAVY

44 AIRPLANES
6424 HOURS

TRAINING	4.00	5.00	6.00	7.00
\bar{X}	1146.24	643.95	134.36	14.79
S	580.99	224.03	53.19	9.51
A ₃	0.62	1.20	1.96	2.55

AIRPLANES
HOURS

COMBAT	4.00	5.00	6.00	7.00
\bar{X}	*			
S				
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	4.00	5.00	6.00	7.00
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	4.00	5.00	6.00	7.00
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
- S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
- A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
- * NO DATA IN THIS CATEGORY
- ** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL F-8K

71 AIRPLANES 29063 HOURS

NAVY

71 AIRPLANES
29030 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	1437.82	446.20	96.91	11.72
S	650.03	235.88	56.92	7.97
A ₃	2.14	2.88	3.90	1.75

2 AIRPLANES
32 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	4829.26	1394.82	324.53	24.96
S	***			
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

\bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

MODEL F-8L

2

AIRPLANES

52

HOURS

NAVY

2

AIRPLANES

HOURS

52

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	92.28	23.07	23.07	0.00
S	**			
A ₃				

AIRPLANES

HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

MARINE

AIRPLANES

HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES

HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

 \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS

S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS

A₃ SKEWNESS OF LOAD RATE DISTRIBUTION

* NO DATA IN THIS CATEGORY

** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL F-8L

36 AIRPLANES 9855 HOURS

NAVY

36 AIRPLANES
9855 HOURS

TRAINING	4.00	5.00	6.00	7.00
\bar{X}	1711.45	498.07	122.96	19.19
S	427.63	204.07	66.53	13.14
A ₃	0.81	0.84	1.31	1.17

AIRPLANES
HOURS

COMBAT	4.00	5.00	6.00	7.00
\bar{X}	*			
S				
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	4.00	5.00	6.00	7.00
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	4.00	5.00	6.00	7.00
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

MODEL P-3A

94 AIRPLANES 53438 HOURS

NAVY

94 AIRPLANES
50154 HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
\bar{X}	11.20	0.44	0.07	0.01
S	47.69	2.37	0.40	0.14
A ₃	8.95	8.36	6.55	9.52

7 AIRPLANES
3284 HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
\bar{X}	6.07	0.00	0.00	0.00
S	**			
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL P-3A

151 AIRPLANES 731176 HOURS

NAVY

150 AIRPLANES
642561 HOURS

TRAINING	2.00	2.50	3.00	3.50
\bar{X}	19.54	1.84	0.23	0.03
S	40.42	4.90	1.61	0.29
A ₃	3.52	6.19	9.43	7.09

101 AIRPLANES
- 88615 HOURS

COMBAT	2.00	2.50	3.00	3.50
\bar{X}	12.80	1.21	0.09	0.01
S	14.92	2.36	0.41	0.11
A ₃	2.94	2.40	3.97	9.84

MARINE

AIRPLANES
HOURS

TRAINING	2.00	2.50	3.00	3.50
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	2.00	2.50	3.00	3.50
\bar{X}	*			
S				
A ₃				

\bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
01-72 TO 12-72

MODEL P-3B

114 AIRPLANES 91342 HOURS

NAVY

114 AIRPLANES
65111 HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
\bar{X}	3.28	0.21	0.02	0.02
S	4.61	0.63	0.12	0.12
A ₃	4.36	3.89	10.23	10.23

56 AIRPLANES
26231 HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
\bar{X}	3.06	0.17	0.00	0.00
S	3.64	0.58	0.00	0.00
A ₃	2.12	4.23	0.00	0.00

MARINE

AIRPLANES
HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL P-3B

124 AIRPLANES 507964 HOURS

NAVY

124 AIRPLANES
423968 HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
\bar{X}	12.20	1.06	0.12	0.03
S	26.52	2.48	0.43	0.20
A ₃	2.32	2.14	2.01	4.67

78 AIRPLANES
83995 HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
\bar{X}	5.00	0.43	0.03	0.01
S	5.47	0.11	0.15	0.11
A ₃	0.61	2.12	5.71	8.41

MARINE

AIRPLANES
HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
01-72 TO 12-72

MODEL P-3C

44 AIRPLANES 24722 HOURS

NAVY

44 AIRPLANES
24397 HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
\bar{X}	5.00	0.41	0.13	0.05
S	7.51	1.19	0.49	0.20
A ₃	3.39	2.99	4.22	5.92

2 AIRPLANES
335 HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
\bar{X}	0.00	0.00	0.00	0.00
S	***			
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL P-3C

44 AIRPLANES 40862 HOURS

NAVY

44 AIRPLANES
40527 HOURS

TRAINING	2.00	2.50	3.00	3.50
\bar{X}	16.13	0.67	0.08	0.04
S	68.00	2.50	0.47	0.22
A ₃	5.87	4.72	3.84	4.18

2 AIRPLANES
335 HOURS

COMBAT	2.00	2.50	3.00	3.50
\bar{X}	0.00	0.00	0.00	0.00
S	0.00			
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	2.00	2.50	3.00	3.50
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	2.00	2.50	3.00	3.50
\bar{X}	*			
S				
A ₃				

\bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
01-72 TO 12-72

MODEL ES-2D

6 AIRPLANES 1931 HOURS

NAVY

6 AIRPLANES
1931 HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
\bar{X}	11.21	1.46	0.55	0.00
S	**			
A ₃				

AIRPLANES
HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
\bar{X}	*			
S				
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
\bar{X}	*			
S				
A ₃				

\bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL ES-2D

6 AIRPLANES 3510 HOURS

NAVY

6 AIRPLANES
3510 HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
\bar{X}	10.41	1.15	0.27	0.00
S	**			
A ₃				

AIRPLANES
HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
\bar{X}	*			
S				
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
\bar{X}	*			
S				
A ₃				

\bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
01-72 TO 12-72

MODEL S-2E

113 AIRPLANES 42177 HOURS

NAVY

113 AIRPLANES
41962 HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
\bar{X}	84.68	14.46	2.85	1.09
S	173.16	22.18	6.33	4.20
A ₃	6.13	4.23	3.96	4.98

5 AIRPLANES
- 215 HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
\bar{X}	0.00	0.00	0.00	0.00
S	**			
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
\bar{X}	*			
S				
A ₃				

\bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL S-2E

228 AIRPLANES 533504 HOURS

NAVY

228 AIRPLANES
504623 HOURS

TRAINING	2.00	2.50	3.00	3.50
\bar{X}	70.79	12.39	3.06	1.01
S	253.88	25.82	7.19	3.37
A ₃	5.82	3.40	2.56	2.84

65 AIRPLANES
28881 HOURS

COMBAT	2.00	2.50	3.00	3.50
\bar{X}	40.67	7.47	1.14	0.42
S	67.96	7.95	1.70	1.33
A ₃	5.07	2.05	2.66	5.00

MARINE

AIRPLANES
HOURS

TRAINING	2.00	2.50	3.00	3.50
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	2.00	2.50	3.00	3.50
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
01-72 TO 12-72

MODEL S-2G

28 AIRPLANES 11694 HOURS

NAVY

28 AIRPLANES
11694 HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
\bar{X}	23.24	3.82	0.67	0.27
S	24.24	9.71	4.26	2.99
A ₃	1.66	3.91	4.67	4.93

AIRPLANES
HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
\bar{X}	*			
S				
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
\bar{X}	**			
S				
A ₃				

\bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL S-2G

28 AIRPLANES 11694 HOURS

NAVY

28 AIRPLANES
11694 HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
\bar{X}	23.24	3.82	0.67	0.27
S	24.24	9.71	4.26	2.99
A ₃	1.66	3.91	4.67	4.93

AIRPLANES
HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
\bar{X}	*			
S				
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
01-72 TO 12-72

MODEL T-2A

21 AIRPLANES 7721 HOURS

NAVY

21 AIRPLANES
7721 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	133.32	15.87	2.29	0.00
S	119.42	17.07	2.24	0.00
A ₃	3.23	3.46	2.23	0.00

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
- S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
- A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
- * NO DATA IN THIS CATEGORY
- ** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL T-2A

147 AIRPLANES 584717 HOURS

NAVY

147 AIRPLANES
584717 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	591.28	44.73	4.84	0.89
S	446.59	55.95	6.49	2.09
A ₃	0.74	1.99	1.82	2.81

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
01-72 TO 12-72

MODEL T-2B

57 AIRPLANES 19981 HOURS

NAVY

57 AIRPLANES
19981 HOURS

TRAINING	5.0G	6.0G	7.0G	8.0G
\bar{X}	245.22	25.23	3.19	0.44
S	227.56	26.03	6.58	0.90
A ₃	3.07	2.67	6.08	3.71

AIRPLANES
HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
\bar{X}	*			
S				
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	5.0G	6.0G	7.0G	8.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
\bar{X}	**			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
- S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
- A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
- * NO DATA IN THIS CATEGORY
- ** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL T-2B

79 AIRPLANES 108637 HOURS

NAVY

79 AIRPLANES
108637 HOURS

TRAINING	5.00	6.00	7.00	8.00
\bar{X}	243.51	25.07	2.65	0.47
S	269.28	37.39	4.53	0.88
A ₃	3.59	4.47	3.99	1.59

AIRPLANES
HOURS

COMBAT	5.00	6.00	7.00	8.00
\bar{X}	*			
S				
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	5.00	6.00	7.00	8.00
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	5.00	6.00	7.00	8.00
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
- S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
- A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
- * NO DATA IN THIS CATEGORY
- ** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
01-72 TO 12-72

MODEL T-2C

8 AIRPLANES 1148 HOURS

NAVY

8 AIRPLANES
1148 HOURS

TRAINING	5.0G	6.0G	7.0G	8.0G
\bar{X}	58.18	12.73	4.78	3.55
S	**			
A ₃				

AIRPLANES
HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
\bar{X}	*			
S				
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	5.0G	6.0G	7.0G	8.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
- S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
- A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
- * NO DATA IN THIS CATEGORY
- ** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL T-2C

8 AIRPLANES 1148 HOURS

NAVY

8 AIRPLANES
1148 HOURS

TRAINING	5.00	6.00	7.00	8.00
\bar{X}	58.18	12.73	4.78	3.55
S	**			
A ₃				

AIRPLANES
HOURS

COMBAT	5.00	6.00	7.00	8.00
\bar{X}	*			
S				
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	5.00	6.00	7.00	8.00
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	5.00	6.00	7.00	8.00
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
01-72 TO 12-72

MODEL T-28B

46 AIRPLANES 21572 HOURS

NAVY

46 AIRPLANES
21572 HOURS

TRAINING	3.0G	4.0G	5.0G	6.0G
\bar{X}	145.68	11.41	0.86	0.00
S	101.30	11.64	1.44	0.00
A ₃	0.77	2.33	3.68	0.00

AIRPLANES
HOURS

COMBAT	3.0G	4.0G	5.0G	6.0G
\bar{X}	*			
S				
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	3.0G	4.0G	5.0G	6.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	3.0G	4.0G	5.0G	6.0G
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL T-28B

98 AIRPLANES 395801 HOURS

NAVY

98 AIRPLANES
395801 HOURS

TRAINING	3.0G	4.0G	5.0G	6.0G
\bar{X}	329.97	44.25	4.73	0.37
S	635.59	113.83	21.31	2.29
A ₃	1.10	2.33	4.54	5.21

AIRPLANES
HOURS

COMBAT	3.0G	4.0G	5.0G	6.0G
\bar{X}	*			
S				
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	3.0G	4.0G	5.0G	6.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	3.0G	4.0G	5.0G	6.0G
\bar{X}	*			
S				
A ₃				

\bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
01-72 TO 12-72

MODEL T-28C

25 AIRPLANES 8057 HOURS

NAVY

25 AIRPLANES
8057 HOURS

TRAINING	3.00	4.00	5.00	6.00
\bar{X}	507.56	46.54	2.24	0.36
S	327.41	35.69	2.74	0.58
A ₃	0.79	1.14	1.79	2.13

AIRPLANES
HOURS

COMBAT	3.00	4.00	5.00	6.00
\bar{X}	*			
S				
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	3.00	4.00	5.00	6.00
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	3.00	4.00	5.00	6.00
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
- S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
- A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
- * NO DATA IN THIS CATEGORY
- ** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL T-28C

43 AIRPLANES 149763 HOURS

NAVY

43 AIRPLANES
149763 HOURS

TRAINING	3.00	4.00	5.00	6.00
\bar{X}	1058.65	139.61	9.04	0.55
S	1293.09	195.56	12.40	1.09
A ₃	0.06	0.45	0.84	1.20

AIRPLANES
HOURS

COMBAT	3.00	4.00	5.00	6.00
\bar{X}	*			
S				
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	3.00	4.00	5.00	6.00
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	3.00	4.00	5.00	6.00
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
01-72 TO 12-72

MODEL T-34B

24 AIRPLANES 15416 HOURS

NAVY

24 AIRPLANES
15416 HOURS

TRAINING	3.00	4.00	5.00	6.00
\bar{X}	639.07	70.56	6.96	0.20
S	593.04	67.30	7.99	0.56
A ₃	0.43	0.56	1.29	3.32

AIRPLANES
HOURS

COMBAT	3.00	4.00	5.00	6.00
\bar{X}	*			
S				
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	3.00	4.00	5.00	6.00
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	3.00	4.00	5.00	6.00
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL T-34B

75 AIRPLANES 143804 HOURS

NAVY

75 AIRPLANES
143804 HOURS

TRAINING	3.0G	4.0G	5.0G	6.0G
\bar{X}	1987.60	301.73	28.59	1.63
S	1283.39	229.15	23.92	5.15
A ₃	-0.39	0.06	0.83	7.12

AIRPLANES
HOURS

COMBAT	3.0G	4.0G	5.0G	6.0G
\bar{X}	*			
S				
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	3.0G	4.0G	5.0G	6.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	3.0G	4.0G	5.0G	6.0G
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

APPENDIX A

**OUT-OF-SERVICE MODELS AND MODELS WHICH HAVE NOT REPORTED COUNTING
ACCELEROMETER DATA DURING THE PREVIOUS 12 MONTHS**

ALL DATA
01-62 TO 12-72

MODEL F-11A

12 AIRPLANES 3744 HOURS

BLUE ANGELS

NAVY

12 AIRPLANES
3744 HOURS

	4.0G	5.0G	6.0G	7.0G
\bar{X}	5414.80	1826.99	520.71	188.84
S	2263.48	740.91	208.44	86.14
A ₃	-0.39	-0.65	-0.79	-0.37

AIRPLANES
HOURS

	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

MARINE

AIRPLANES
HOURS

	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL F-11A

11 AIRPLANES 4400 HOURS

BLUE ANGELS

NAVY

11 AIRPLANES
4400 HOURS

	6.0G	7.0G	8.5G	10.0G
\bar{X}	740.74	192.71	12.43	3.88
S	217.97	62.76	7.33	7.05
A ₃	0.19	0.26	0.95	2.32

AIRPLANES
HOURS

	6.0G	7.0G	8.5G	10.0G
\bar{X}	*			
S				
A ₃				

MARINE

AIRPLANES
HOURS

	5.0G	7.0G	8.5G	10.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

	6.0G	7.0G	8.5G	10.0G
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL AF-1E

21 AIRPLANES 4527 HOURS

NAVY

21 AIRPLANES
4527 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	563.04	125.53	22.27	3.60
S	200.25	52.92	16.14	4.72
A ₃	0.29	0.61	1.63	2.00

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL A-1H

28 AIRPLANES 7290 HOURS

NAVY

22 AIRPLANES
374 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	263.05	94.29	6.31	0.00
S	42.25	16.64	2.73	0.00
A ₃	1.13	0.68	2.05	0.00

28 AIRPLANES
6916 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	322.42	89.29	14.84	0.00
S	77.52	27.19	6.46	0.00
A ₃	1.14	1.22	1.07	0.00

MARINE

AIRPLANES
HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

\bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

MODEL A-1J

4 AIRPLANES 917 HOURS

NAVY

1 AIRPLANES
32 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	0.00	0.00	0.00	0.00
S	**			
A ₃				

4 AIRPLANES
885 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	306.82	125.89	17.28	0.00
S	**			
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL A-3B

80 AIRPLANES 69204 HOURS

NAVY

90 AIRPLANES
60301 HOURS

TRAINING	2.00	2.50	3.00	3.50
\bar{X}	649.10	175.85	55.56	12.41
S	417.74	111.84	45.03	24.05
A ₃	1.40	1.18	1.99	6.35

24 AIRPLANES
• 8993 HOURS

COMBAT	2.00	2.50	3.00	3.50
\bar{X}	623.15	187.81	76.93	37.49
S	244.96	120.08	77.16	46.34
A ₃	0.61	1.43	2.55	2.86

MARINE

AIRPLANES
HOURS

TRAINING	2.00	2.50	3.00	3.50
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	2.00	2.50	3.00	3.50
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL A-4B

58 AIRPLANES 23177 HOURS

NAVY

55 AIRPLANES
20376 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	681.15	238.03	49.07	7.87
S	358.28	164.65	46.69	9.80
A ₃	0.67	1.04	2.09	2.14

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

MARINE

8 AIRPLANES
2800 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	268.45	64.34	10.94	0.99
S	**			
A ₃				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL TA-4B

21 AIRPLANES 8198 HOURS

NAVY

21 AIRPLANES
8198 HOURS

TRAINING	4.00	5.00	6.00	7.00
\bar{X}	384.01	143.16	41.39	7.28
S	416.24	182.80	54.39	12.86
A ₃	1.32	1.56	1.97	2.59

AIRPLANES
HOURS

COMBAT	4.00	5.00	6.00	7.00
\bar{X}	*			
S				
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	4.00	5.00	6.00	7.00
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	4.00	5.00	6.00	7.00
\bar{X}	*			
S				
A ₃				

\bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL A-5A

30 AIRPLANES 11790 HOURS

NAVY

30 AIRPLANES
11790 HOURS

TRAINING	3.0G	4.0G	5.0G	6.0G
\bar{X}	579.58	129.26	9.04	0.89
S	487.22	42.19	4.68	1.00
A ₃	4.57	0.57	0.75	1.63

AIRPLANES
HOURS

COMBAT	3.0G	4.0G	5.0G	6.0G
\bar{X}	*			
S				
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	3.0G	4.0G	5.0G	6.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	3.0G	4.0G	5.0G	6.0G
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL A-5B

5 AIRPLANES 985 HOURS

NAVY

5 AIRPLANES
985 HOURS

TRAINING	3.0G	4.0G	5.0G	6.0G
\bar{X}	125.50	13.83	1.01	0.00
S	**			
A ₃				

AIRPLANES
HOURS

COMBAT	3.0G	4.0G	5.0G	6.0G
\bar{X}	*			
S				
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	3.0G	4.0G	5.0G	6.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	3.0G	4.0G	5.0G	6.0G
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
- S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
- A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
- * NO DATA IN THIS CATEGORY
- ** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL KC-130F

12 AIRPLANES 17648 HOURS

NAVY

	TRAINING	2.0G	2.5G	3.0G	3.5G
AIRPLANES	\bar{X}	*			
HOURS	S				
	A ₃				

	COMBAT	2.0G	2.5G	3.0G	3.5G
AIRPLANES	\bar{X}	*			
HOURS	S				
	A ₃				

MARINE

	TRAINING	2.0G	2.5G	3.0G	3.5G
12 AIRPLANES	\bar{X}	6.76	0.42	0.08	0.00
17648 HOURS	S	5.79	0.51	0.22	0.00
	A ₃	-0.38	0.30	1.82	0.00

	COMBAT	2.0G	2.5G	3.0G	3.5G
AIRPLANES	\bar{X}	*			
HOURS	S				
	A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL F-4A

27 AIRPLANES 17193 HOURS

NAVY

27 AIRPLANES
17193 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	794.95	261.01	66.29	11.89
S	275.55	127.26	42.65	8.70
A ₃	0.09	0.33	0.71	1.19

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL TF-4A

4 AIRPLANES 433 HOURS

NAVY

4 AIRPLANES
433 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	135.48	23.72	3.32	0.00
S	***			
A ₃				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL F-4G

3 AIRPLANES 1668 HOURS

NAVY

12 AIRPLANES
7848 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	1026.48	290.88	80.22	17.65
S	146.46	78.80	33.48	11.25
A ₃	-0.36	-0.07	0.03	0.30

10 AIRPLANES
2448 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	1579.58	589.78	138.67	27.35
S	243.27	132.59	53.36	13.34
A ₃	0.80	1.14	1.24	0.97

MARINE

AIRPLANES
HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL F-6A

46 AIRPLANES 17986 HOURS

NAVY

29 AIRPLANES
12399 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	190.91	25.88	1.99	0.20
S	143.14	29.94	2.18	0.75
A ₃	2.41	2.60	1.96	2.92

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

MARINE

26 AIRPLANES
5587 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	147.15	17.74	0.53	0.00
S	32.97	7.42	0.68	0.00
A ₃	1.24	0.80	2.11	0.00

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL F-8A

48 AIRPLANES 33043 HOURS

NAVY

48 AIRPLANES
33043 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	678.64	171.70	32.28	5.44
S	330.20	100.28	22.83	4.33
A ₃	0.32	0.50	0.75	1.38

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL RF-8A

28 AIRPLANES 20290 HOURS

NAVY

23 AIRPLANES
15203 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	317.32	80.22	13.37	2.05
S	120.58	36.11	7.56	1.88
A ₃	0.56	0.52	0.61	1.90

4 AIRPLANES
355 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	221.00	34.00	5.73	5.73
S	***			
A ₃				

MARINE

10 AIRPLANES
4726 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	151.04	28.24	4.41	0.56
S	***			
A ₃				

AIRPLANES
6 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	0.00	0.00	0.00	0.00
S	***			
A ₃				

\bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL TF-8A

30 AIRPLANES 4924 HOURS

NAVY

30 AIRPLANES
4924 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	1274.72	393.67	82.63	14.88
S	354.70	139.02	33.41	6.09
A ₃	0.88	2.10	2.48	0.98

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL F-8B

53 AIRPLANES 40015 HOURS

NAVY

46 AIRPLANES
29272 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	813.00	203.68	34.52	3.65
S	316.12	100.90	23.43	3.94
A ₃	0.99	1.13	1.73	2.98

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

MARINE

36 AIRPLANES
10743 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	778.09	148.63	19.24	2.49
S	188.70	53.00	9.18	2.34
A ₃	1.26	1.68	1.46	2.06

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

\bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL F-8C

87 AIRPLANES 76054 HOURS

NAVY

78 AIRPLANES
53012 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	875.42	217.67	38.78	4.89
S	534.39	164.74	37.06	6.76
A ₃	1.20	1.14	1.60	2.57

11 AIRPLANES
1689 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	848.92	194.84	49.77	6.46
S	575.01	119.04	27.36	6.78
A ₃	0.22	0.30	0.17	1.45

MARINE

37 AIRPLANES
20851 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	1217.83	346.89	67.32	10.17
S	370.14	107.60	22.36	4.73
A ₃	1.83	1.60	1.66	0.05

11 AIRPLANES
502 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	748.69	333.97	61.52	9.71
S	150.27	64.69	13.85	2.68
A ₃	0.24	0.03	0.32	0.47

\bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL F-8D

101 AIRPLANES 70988 HOURS

NAVY

93 AIRPLANES
49588 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	1176.54	326.40	68.29	11.47
S	490.92	154.19	37.61	7.70
A ₃	0.55	0.48	0.72	1.25

15 AIRPLANES
1060 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	1380.67	394.15	107.24	22.87
S	468.87	79.59	21.81	6.83
A ₃	2.59	0.29	0.19	0.71

MARINE

46 AIRPLANES
19583 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	826.64	216.72	45.39	8.03
S	398.11	118.51	30.75	5.85
A ₃	0.83	0.90	1.13	1.50

11 AIRPLANES
758 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	546.18	88.42	8.42	4.32
S	71.24	22.70	6.19	6.09
A ₃	0.78	0.56	1.85	2.38

\bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL F-8E

248 AIRPLANES 198601 HOURS

NAVY

243 AIRPLANES
125946 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	1994.36	610.43	131.38	19.66
S	717.23	205.58	53.09	11.45
A ₃	1.87	1.50	1.62	2.23

103 AIRPLANES
27936 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	1074.97	372.62	92.68	17.22
S	193.19	101.22	41.20	15.20
A ₃	0.06	0.97	3.20	5.50

MARINE

88 AIRPLANES
26217 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	1551.79	453.60	92.16	15.17
S	451.22	138.34	35.57	9.01
A ₃	0.49	0.04	0.50	1.61

52 AIRPLANES
18501 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	1334.99	460.44	118.91	19.35
S	373.38	123.04	28.68	8.02
A ₃	3.39	0.45	0.60	1.58

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

MODEL EF-10B

16 AIRPLANES 9853 HOURS

NAVY

	TRAINING	3.0G	4.0G	5.0G	6.0G
AIRPLANES	\bar{X}	*			
HOURS	S				
	A ₃				

	COMBAT	3.0G	4.0G	5.0G	6.0G
AIRPLANES	\bar{X}	*			
HOURS	S				
	A ₃				

MARINE

	TRAINING	3.0G	4.0G	5.0G	6.0G
14 AIRPLANES	\bar{X}	16.24	0.00	0.00	0.00
7526 HOURS	S	10.06	0.00	0.00	0.00
	A ₃	-0.59	0.00	0.00	0.00

	COMBAT	3.0G	4.0G	5.0G	6.0G
10 AIRPLANES	\bar{X}	45.06	2.22	0.00	0.00
2327 HOURS	S	**			
	A ₃				

\bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL F-11A

36 AIRPLANES 22538 HOURS

NAVY

36 AIRPLANES
22538 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	2796.39	593.37	80.02	10.38
S	916.87	259.16	60.36	10.36
A ₃	1.30	1.37	3.46	3.50

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 12-72

MODEL S-2D

67 AIRPLANES 59015 HOURS

NAVY

67 AIRPLANES
59445 HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
\bar{X}	33.25	7.71	1.77	0.74
S	34.30	9.23	5.36	4.85
A ₃	1.72	1.98	6.51	7.25

8 AIRPLANES
570 HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
\bar{X}	25.35	2.10	0.00	0.00
S	***			
A ₃				

MARINE

AIRPLANES
HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
\bar{X}	*			
S				
A ₃				

AIRPLANES
HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
\bar{X}	*			
S				
A ₃				

- \bar{X} MEAN CUMULATIVE COUNTS PER 1000 HOURS
 S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
 A₃ SKEWNESS OF LOAD RATE DISTRIBUTION
 * NO DATA IN THIS CATEGORY
 ** INSUFFICIENT DATA IN THIS CATEGORY

APPENDIX B

AIR VEHICLE TECHNOLOGY DEPARTMENT NAVAL AIR DEVELOPMENT CENTER WARMINSTER, PA. 18974

Subj: The Determination of Sample Statistics for Counting Accelerometer Data

Ref: (a) Brownlee, K. A., "Statistical Theory and Methodology in Science and Engineering," Wiley 1965, pp. 358-359
(b) Dixon & Massey, Introduction to Statistical Analysis, McGraw-Hill, Second Edition, 1957, pp. 194-195

1. The purpose of this technical memorandum is to define and justify the methods used at NAVAIRDEVCEEN in calculating statistics describing counting accelerometer data. The subsequent outlined sequence is repeated for each aircraft model, for each mission category, and for each g-level where there is sufficient data.

2. These are the methods used for determining sample statistics. Consider a scatter diagram of cumulative counts (at any g-level) vs. flight hours,

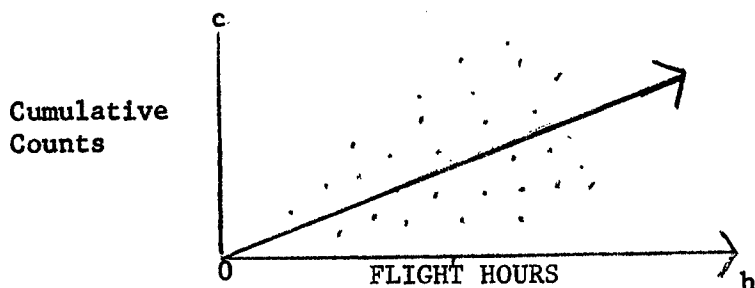


Figure 1

where each dot represents the cumulative counts and flight hours accrued by an individual serial number which is flying or has flown.

Let h_i be the total quality control accepted flight hours for the i^{th} plane ($i=1, 2, \dots, N$)

Let c_i be the cumulative counts during the h_i hours for the i^{th} plane ($i=1, 2, \dots, N$)

N is the total number of aircraft of this model and mission category for which there is recorded information.

Then

$$(1) \ b = \frac{\sum_{i=1}^N c_i h_i}{\sum_{i=1}^N h_i^2}$$

where b is slope of line (Figure 1) through origin fitted by least squares

$$(2) \ \bar{x} = 1000b$$

estimated mean load exceedances at 1000 hours

$$(3) \bar{h} = \frac{\sum_{i=1}^N h_i}{N} \quad \text{average flight hours}$$

$$(4) \hat{\sigma}_{ch}^2 = \frac{\sum_{i=1}^N (c_i - b h_i)^2}{N-1} \quad \text{estimator of the population standard error squared of the regression}$$

$$\hat{\sigma}_{ch} = \sqrt{\hat{\sigma}_{ch}^2} \quad \text{estimator of the population standard error of the regression}$$

$$(5) S = \sqrt{1000 \hat{\sigma}_{ch}^2 / h} \quad \text{estimated standard deviation (counts at 1000 hours) of the load exceedances for each g-level}$$

$$(6) A_3 = \frac{\sum_{i=1}^N (c_i - b h_i)^3}{N \hat{\sigma}_{ch}^3} \quad \text{estimated skewness}$$

3. The following is the explanation and justification for these methods:

Aircraft which do not have any flight hours must have zero counts; therefore, the line in figure 2 must go through (0,0). Brownlee (reference (a)) describes the methods for fitting a least squares line through the origin (0,0). The slope of this line is the estimated mean exceedance rate (per hour). Multiplying this rate by 1000 will result in exceedances at 1000 hours (equation (2)). Multiplying b by any other h number of hours will result in mean exceedances at h hours.

If the data in figure 1 were separated into flight hour intervals (see figure 2) and the standard error in each interval were plotted against average flight hours (see figure 3) in that interval, the resultant curve is assumed to have the square root functional form.* Due to limitations in sample size, these individual $\hat{\sigma}$'s could not be determined accurately; thus, it was necessary to calculate a single $\hat{\sigma}_{ch}$ for all h combined and apply it at \bar{h} .** Equation (5) uses figure 3 to convert $\hat{\sigma}_{ch}$ at \bar{h} to S at 1000 hours.

* This is partially justified by the fact that the variance of a sum of independent random variables is equal to the sum of the independent variances. Unreported statistical tests performed at NAVAIRDEVCON show that figure 3 is a reasonable fit to actual data. It should be noted that the $\hat{\sigma}$'s in figure 2 are estimated by equation (4), but each $\hat{\sigma}$ was calculated using the data points in the respective interval.

**The estimated standard error $\hat{\sigma}_{ch}$ is used as the standard error of estimate for a hypothetical distribution of planes all having \bar{h} hours. This follows from work in reference (b).

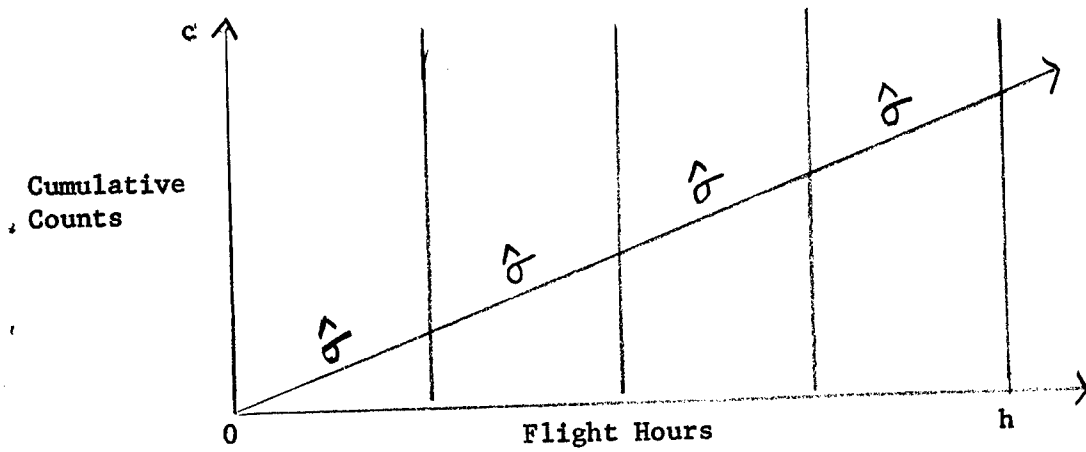


FIGURE 2

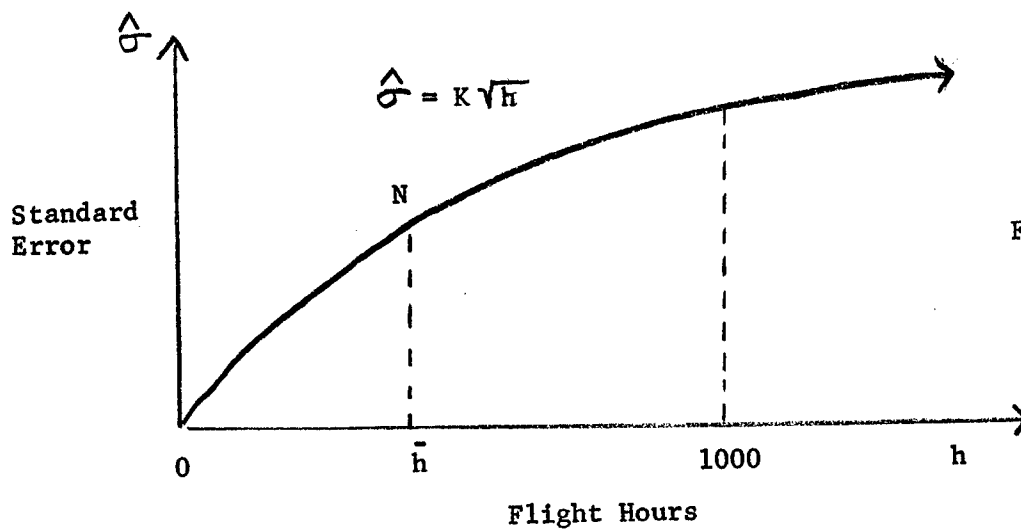


FIGURE 3

If one wanted the standard error at some other value of hours h , he would simply replace 1000 in equation (5) by that value of hours h , and the appropriate standard error would result.

Skewness A_3 is computed in equation (6). This measure indicates whether more airplane load exceedances are above the mean line or below the mean line. If:

- $A_3 < 0$ More load exceedances are above mean line than below
- $A_3 = 0$ Equal number of load exceedances above and below mean
- $A_3 > 0$ More load exceedances are below mean line than above

(Strictly speaking a distribution is symmetrical only if all its odd moments are zero; however, the above statement is approximately true.)

4. For ease of computation, equation (4) can be expanded as follows:

$$(N-1) \hat{\sigma}_{ch}^2 = \sum_{i=1}^N (c_i - bh_i)^2$$

$$(N-1) \hat{\sigma}_{ch}^2 = \sum_{i=1}^N (c_i^2 - 2bc_i h_i + b^2 h_i^2)$$

$$(7) (N-1) \hat{\sigma}_{ch}^2 = \sum_{i=1}^N c_i^2 - 2b \sum_{i=1}^N c_i h_i + b^2 \sum_{i=1}^N h_i^2$$

but

$$b = \frac{\sum_{i=1}^N c_i h_i}{\sum_{i=1}^N h_i^2}$$

and (7) can be reduced to

$$(N-1) \hat{\sigma}_{ch}^2 = \sum_{i=1}^N c_i^2 - 2b \sum_{i=1}^N c_i h_i + b \frac{\sum_{i=1}^N c_i h_i \sum_{i=1}^N h_i^2}{\sum_{i=1}^N h_i^2}$$

then

$$(8) \hat{\sigma}_{ch}^2 = \left(\sum_{i=1}^N c_i^2 - b \sum_{i=1}^N c_i h_i \right) / (N-1)$$

Equation (8) will be used in lieu of equation (4) in determining $\hat{\sigma}_{ch}^2$.

5. An example using F-4G training Navy data, 12 airplanes 4.0G level:

<u>Serial No.</u>	<u>Counts (c_i)</u>	<u>Hours (h_i)</u>
150481	1567	1341.7
150484	649	618.2
150487	1114	1100.8
150489	5	27.3
150492	768	691.7
150625	23	139.6
150629	396	555.1
150633	718	831.3
150636	854	839.1
150639	536	695.4
150642	910	775.3
150645	160	233.0

The following are tabulated:

$$\sum_{i=1}^N h_i = 7848.5$$

$$\sum_{i=1}^N c_i = 7700$$

$$\sum_{i=1}^N c_i h_i = 6913341.6$$

$$\sum_{i=1}^N h_i^2 = 6735017.87$$

$$\sum_{i=1}^N c_i^2 = 7250716.00$$

$$\sum_{i=1}^N (c_i - b h_i)^3 = -7082690$$

and are used in the following equations:

$$(1) \ b = \frac{6913341.6}{6735017.87} = 1.02647 \text{ cts. per hr.}$$

$$(2) \ \bar{x} = 1000 (1.02647) = 1026.47 \text{ cts. at 1000 hrs.}$$

$$(3) \ \bar{h} = \frac{7848.5}{12} = 654.04 \text{ hours}$$

$$(8) \ \hat{\sigma}_{ch}^2 = \frac{7250716 - 1.02647 (6913341.6)}{11} = 14034 \quad \hat{\sigma}_{ch} = 118.5$$

$$(5) \ s = \sqrt{1000 (14034)/654} = 146.46 \text{ cts. at 1000 hours.}$$

$$(6) \ A_3 = \frac{-7082690}{12 (118.5)^3} = -.36$$

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